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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,014	09/16/2003	Ferenc Mohacsi	031009-9131-01	2753
23409	7590	07/13/2005	EXAMINER	
MICHAEL BEST & FRIEDRICH, LLP 100 E WISCONSIN AVENUE MILWAUKEE, WI 53202			SAWHNEY, HARGOBIND S	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/664,014	Applicant(s) MOHACSI, FERENC	
	Examiner Hargobind S. Sawhney	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 17-31, 36-42 and 47-49 is/are pending in the application.
 4a) Of the above claim(s) 13-16, 32-35, and 43-46 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12, 17-31 and 36-38 is/are allowed.
- 6) ☒ Claim(s) 39-42 and 49 is/are rejected.
- 7) ☒ Claim(s) 47 and 48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/24/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment and response to the non-final office action filed on April 11, 2005 have been entered.
2. The provisional election of Species I of figures 1-4, reading claims 1-12, 17-31, 36-42 and 47-49, has been noted. The examiner concurs with the above-indicated election by the applicant. Accordingly, claims 1-12, 17-31, 36-42 and 47-49 have been examined in this office action, and claims 13-16, 32-35, and 43-46 have been withdrawn from further consideration.

Further, each of claims 1, 20 and 39 does not read on each and every species identified by the examiner. Therefore, none of the claims has been considered generic.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 39 is rejected under 35 U.S.C. 102(b) as being anticipated by Cooper (US Patent No.: 3,757,104).

Cooper ('104) discloses a light –emitting apparatus comprising:

- a side-emitting light source 30 having sides connecting a bottom and a top

(Figure 1); and the light source emitting light of a desired color through the sides (Figure 1);

- a base 12a supporting the light source (Figure 1, column 2, line 10);
- a window portion 16,31 – defined by reflector elements 16 and 31 (Figures 1 and 2, column 2, lines 25-29) – partially surrounding the light source 30 (Figure 1, column 2, lines 17-21), and the window portion 16,31 extending through a window arc of predetermined arc size (Figure 1);
- a multi-faceted reflector 16 – with a plurality of surfaces including top, a bottom and sides – reflecting light towards the window 16,31 (Figure 1, column 2, lines 20-22);
- the reflector 16 together with the window 16,31 encircling the sides of the light source (Figures 1 and 2); and
- the multi-faceted reflector 16 – including a top, bottom and side surfaces and the surface element 31- producing wedge-shaped directional beam of light (Figure 1). Note: passing the light flux emitted from the light source 30 through the aperture in the reflector would produce spreading in a wedge-formed configuration.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 40-42 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (US Patent No.: 3,757,104) in view of LUMILEDS Lighting, LLC (Technical Concept Data Luxeon Star/ side emitting, 2002 Pub. No.: JP03 and DS23 (July 2002); hereinafter referred as LUMILEDS.

Note: The applicant has admitted LUMILEDS as a prior art in the instant application specification (page 6, lines 17-19).

Regarding claim 40, Cooper ('104) discloses a light –emitting apparatus comprising a side-emitting light source being an incandescent bulb. However, Cooper ('104) does not teach the light –emitting apparatus equipped with a side-emitting light emitting diode (LED).

On the other hand, LUMILEDS discloses a side-emitting LED (Figure in Page 2) useable for navigation lights –Beacons – (LUMILEDS, Suggested Applications in Page 1 of JP03).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the light –emitting apparatus of Cooper ('104) by replacing the incandescent light source with the side-emitting LED as taught by LUMILEDS for the advantages and benefits of compactness, high energy efficiency and long operational life of the device.

Regarding claims 41 and 42, Cooper ('104) in view of LUMILEDS discloses the light emitting apparatus comprising the side-emitting LED (Figure in Page 2) including:

- a truncated substantially spherical portion and a frustoconical portion having a concave top (LUMILEDS, page 2, Figure illustrating "Luxeon Star"; and the prior art admitted in the instant application specification, page 6, lines 10-19);
- the frustoconical portion positioned adjacent the truncated substantially spherical portion (LUMILEDS, page 2, Figure illustrating "Luxeon Star"; and the prior art admitted in the instant application specification, page 6, lines 10-19); and
- the light emitting apparatus comprising the side-emitting LED, and the light emitting apparatus usable as a navigation light – beacon - (LUMILEDS, Suggested Applications in Page 1 of JP03).

Regarding Claim 49, Cooper ('104) in view of LUMILEDS discloses the light emitting apparatus comprising the side-emitting LED (Figure in Page 2) including:

- a truncated substantially spherical portion and a frustoconical portion having a concave top (LUMILEDS, page 2, Figure illustrating "Luxeon Star"; and the prior art admitted in the instant application specification, page 6, lines 10-19); and
- the frustoconical portion 82 reflecting light emitted by the LED (the prior art admitted in the instant application specification, page 6, lines 10-19).

However, Cooper ('104) and the admitted prior art does not teach the frustoconical reflective portion 82 including a reflective coating.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to realize a need of applying reflective coating, well known in the art, on the surface of the frustoconical portion to make it reflective for efficient light reflection in the predetermined direction.

Allowable Subject Matter

7. Claims 1-12, 17-19, 20-31 and 36-38 are allowed.

The prior art of record, including Cooper ('104) and LUMILEDS, does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose a light-emitting apparatus combining:

- a reflector partially surrounding a side-emitting optoelectronic device, and the reflector spaced from the optoelectronic device as claimed in claims 1 and 20;
- a window portion defining an arc, and the window outputting the light in the defined arc as recited in claims 1 and 20.

The above-indicated combination, including an arc-shaped window producing an arc shaped beam of light emitted by an optoelectronic device, makes this invention unique.

The prior art, including those indicated above, teaches an LED-based light emitting apparatus emitting light in all directions – 360 degrees – in substantially horizontal plane.

Claim 2-12 and 17-19 are necessarily allowed because of its dependency on the allowed base Claim 1.

Claim 21-31 and 36-38 are necessarily allowed because of its dependency on the allowed base Claim 20.

8. Claims 47 and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record, including Cooper ('104) and LUMILEDS, does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose a light-emitting apparatus combining a second reflector reflecting light perpendicular to a central axis of the side-emitted light source as recited in Claim 47.

Claim 48 is necessarily objected because of its dependency on the objected base Claim 47.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Taylor (US Patent No.; 6,626,557 B1), Marsh (US Patent No.; 6,627,922 B1), Rizkin et al. (US Patent No.; 6,543,911 B1), Suckow et al. (US Patent No.; 6,183,100

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B1), Robertson (US Patent No.; 6,086,218), Vukosic (US Patent No.; 5,929,788), Czipri (US Patent No.; 5,285,359) and Jinko et al. (US Patent No.; 4,931,768)


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S. Sawhney whose telephone number is 703-306-5909. The examiner can normally be reached on 6:15 - 2:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HSS

6/16/2005


Stephen Husar
Primary Examiner